Docket No.: 549172000113

Prior to examination of the above-referenced application, please amend the claims as indicated herein.

AMENDMENTS TO THE CLAIMS

2 .

Claim 1 (Currently amended): A method for selectively stimulating proliferation and differentiation of T lymphoid cells to generate a high density of generating clinically relevant numbers of T lymphoid Th2 cells, comprising:

(a) collecting material comprising body fluid or tissue containing <u>T-cells from the</u> peripheral blood mononuclear cells from of a mammal;

treating the cells under conditions whereby *ex vivo* differentiation of the cells into Th2 like or Th2 cells is induced; and

contacting, in the absence of exogenous interleukin-2, the material with two or more activating proteins specific for cell surface proteins present on cells in the material and in an amount sufficient to induce *ex vivo* cell expansion, whereby the cells expand to at least about 10¹⁰ cells comprising predominantly Th2 or Th2-like cells.

- (b) · stimulating the T-cells to induce differentiation into Th2 cells, wherein the cells are stimulated by two or more monoclonal antibodies in the absence of exogenous IL-2 and in the presence of one or more agents selected from the group consisting of IL-4, anti-IFN-γ antibody, and anti-IL-12 antibody; and
- (c) expanding the cells to at least 10⁸ cells/milliliter, wherein the cells are a homogenous population of Th2 cells.

Claim 2 (Canceled)

Claim 3 (Currently amended): The method of claim 1, wherein the expanded Th2 cells are specific for a defined antigen.

Claim 4 (Currently amended): The method of claim 1, wherein the expanded cells are predominantly homogeneous population of Th2 cells comprises greater than about 50% Th2 cells.

Application No.: 09/824,906 3 Docket No.: 549172000113

Claim 5 (Currently amended): The method of claim 1, wherein the cells are activated ex vivo in the presence of IL-4 with or without the presence of anti-gamma interferon and anti-IL-12 monoclonal antibodies to cause differentiation into Th2 cells expanded Th2 cells do not require IL-2.

Claims 6-7 (Canceled)

Claim 8 (Original): The method of claim 7, wherein the monoclonal antibodies are specific for CD3 or CD2, combined with any combination of monoclonal antibodies specific for one or more of the following: CD4, CD8, CD11a, CD27, CD28, CD44 and CD45RO.

Claim 9 (Currently amended): The method of claim 1, wherein <u>the</u> cells expansion is effected are expanded in a hollow fiber bioreactor <u>or a culture bag</u>.

Claims 10-11 (Canceled)

Claim 12 (Original): The method of claim 1, wherein the mammal is a human.

Claims 13-70 (Canceled)

Claim 71 (Withdrawn): A composition, comprising predominantly Th2 or Th2-like cells produced by the method of claim 1.

Claim 72 (Withdrawn): The composition of claim 71, wherein the cells are at a density of 1×10^8 cells/ml.

Claim 73 (Withdrawn): A method of treatment of diseases in which a Th1 cytokine profile predominates, comprising administering the composition of claim 71, thereby altering the ratio of Th1/Th2 cell.

Claim 74 (Withdrawn): The method of claim 72, wherein the disease is a chronic inflammatory disease, chronic infectious diseases or an autoimmune disease.

Application No.: 09/824,906

4

Docket No.: 549172000113

Claim 75 (Withdrawn): The method of claim 74, wherein the disease is selected from the group consisting of multiple sclerosis, rheumatoid arthritis, Crohn's Disease, autoimmune thyroid disease and inflammatory bowel disease.

Claim 76 (Withdrawn): The method of claim 74, wherein the disease is selected from the group consisting of infections with human immunodeficiency virus, herpes simplex virus, cytomegalovirus or hepatovirus.

Claim 77 (Withdrawn): A composition produced by the method of claim 20.

Claim 78 (Withdrawn): A method of specific immunosuppression in organ and tissue transplant procedures or to provide immunoprotection in vaccination, comprising administering the composition of claim 20.

Claim 79 (Withdrawn): The method of claim 74, wherein the disease is rheumatoid arthritis, wherein the composition is produced by a method comprising:

collecting mononuclear cells from a rheumatoid arthritis patient;

expanding the cells under conditions whereby a composition containing an amount of Th2 cells sufficient to suppress or reduce the chronic inflammatory lesions of the arthritis is generated; and

infusing the resulting composition of cells into the patient.

Claim 80 (Withdrawn): The method of claim 79, wherein the number Th2 cells is at least 10⁹.

Claim 81 (Withdrawn): The method of claim 79, wherein the cells are contained in a volume of 1 liter or less.

Claim 82 (Withdrawn): The method of claim 74, wherein the disease is multiple sclerosis, and the composition is produced by a method, comprising:

collecting mononuclear cells from a multiple sclerosis patient;

expanding the cells under conditions whereby a composition containing an amount of Th2 cells sufficient to ameliorate the symptoms or retard or stop the progression of multiple sclerosis is generated; and

5

infusing the resulting composition of cells into the patient.

- Claim 83 (Withdrawn): The method of claim 82, wherein the number of cells is at least 10⁹ cells.
- Claim 84 (Withdrawn): The method of claim 82, wherein the cells are contained in a volume of 1 liter or less.
- Claim 85 (Withdrawn): The method of claim 82, wherein the cells have a memory phenotype.
- Claim 86 (Withdrawn): The method of claim 82, wherein the cells are specific for myelin or encephalitogenic epitopes of myelin antigens.
- Claim 87 (Withdrawn): The method of claim 74, wherein the disease is an inflammatory bowel disease (IBD), and the composition is produced by a method, comprising: collecting mononuclear cells from an IBD patient;
- expanding the cells under conditions whereby a composition containing an amount of Th2 cells sufficient to ameliorate the symptoms or retard or stop the progression of the IBD; and infusing the resulting composition of cells into the patient.
- Claim 88 (Withdrawn): The method of claim 87, wherein the number of cells is at least 10^9 cells.
- Claim 89 (Withdrawn): The method of claim 87, wherein the cells are contained in a volume of 1 liter or less.
- Claim 90 (Withdrawn): The method of claim 87, wherein the disease is Crohn's disease (CD) or ulcerative colitis (UC).

Docket No.: 549172000113

Claim 91 (Withdrawn): The method of claim 87, wherein the Th2 cells express integrin, $\alpha 4$, $\beta 7$.

6

Claim 92 (Withdrawn): A method for suppression of transplant rejection, comprising: collecting mononuclear cells from a patient prior to undergoing organ or tissue transplantation;

expanding the cells under conditions whereby a composition containing an amount of Th2 cells sufficient to prevent rejection of the transplanted organ or tissue is generated; and infusing the resulting composition of cells into the patient.

Claim 93 (Withdrawn): The method of claim 92, wherein the number of cells is at least 10^9 cells.

Claim 94 (Withdrawn): The method of claim 92, wherein the cells are contained in a volume of 1 liter or less.

Claim 95 (Withdrawn): The method of claim 92, wherein the transplanted tissue are transplanted islets of Langerhans.

Claim 96 (Withdrawn): The method of claim 92, wherein the cells are specific for the alloantigens or for an antigen unique to the transplanted tissue or organ.

Claim 97 (Withdrawn): A method for treating insulin-dependent diabetes mellitus (IDDM), comprising:

collecting mononuclear cells from a patient diagnosed with IDDM or at high risk for developing IDDM;

expanding the cells under conditions whereby a composition containing an amount of Th2 cells sufficient to prevent or retard islet destruction; and

infusing the resulting composition of cells into the patient.

Claim 98 (Withdrawn): The method of claim 97, wherein the number of cells is at least 10^9 cells.

Application No.: 09/824,906

Docket No.: 549172000113

Claim 99 (Withdrawn): The method of claim 97, wherein the cells are contained in a volume of 1 liter or less.

7

Claim 100 (Withdrawn): Cells produced by the method of claim 1 that have a CD⁺⁴ phenotype.

Claim 101 (Withdrawn): Cells produced by the method of claim 1 that have a CD+8 phenotype.